

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

REC'D 14 FEB 2006

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference E059307-LG	FOR FURTHER ACTION	
See Form PCT/IPEA/416		
International application No. PCT/IT2004/000496	International filing date (day/month/year) 15.09.2004	Priority date (day/month/year) 03.10.2003
International Patent Classification (IPC) or national classification and IPC A23G3/20		
Applicant COMAS S.P.A. ET AL.		

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of 5 sheets, as follows:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. <p>b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>
<p>4. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Box No. I Basis of the opinion <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application

Date of submission of the demand 21.06.2005	Date of completion of this report 15.02.2006
Name and mailing address of the international preliminary examining authority: European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Cametz, C Telephone No. +31 70 340-3434



**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/IT2004/000496

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 - This report is based on translations from the original language into the following language, which is the language of a translation furnished for the purposes of:
 - international search (under Rules 12.3 and 23.1(b))
 - publication of the international application (under Rule 12.4)
 - international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages

1-15 as originally filed

Claims, Numbers

1-19 received on 21.06.2005 with letter of 17.06.2005

Drawings, Sheets

1/3-3/3 as originally filed

a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. The amendments have resulted in the cancellation of:
 - the description, pages
 - the claims, Nos.
 - the drawings, sheets/figs
 - the sequence listing (*specify*):
 - any table(s) related to sequence listing (*specify*):
4. This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 - the description, pages
 - the claims, Nos.
 - the drawings, sheets/figs
 - the sequence listing (*specify*):
 - any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**International application No.
PCT/IT2004/000496**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Yes: Claims	1-19
	No: Claims	
Inventive step (IS)	Yes: Claims	1-19
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-19
	No: Claims	

2. Citations and explanations (Rule 70.7):**see separate sheet****Box No. VIII Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following documents:

D1: US-A-3 717 752 (WARNING W) 20 February 1973 (1973-02-20)
D6: EP-A-0 551 949 (LELY NV C VAN DER) 21 July 1993 (1993-07-21)

2. The document D1, which is considered to represent the most relevant state of the art, discloses (see column 2, lines 30 to 46; column 3, lines 40 to 48; column 4, lines 40 to 46; figures; and the observations mentioned in item VIII below): a
- 2.1 Machine for decorating a food product, in particular a cake (11) having at least one side surface and a top surface, with an ingredient in granular form; *comprising*:
- a support structure (Fig. 1, 2);
 - distribution means (20) mounted on said support structure (Fig. 1, 2) and able to project said ingredient in granular form in at least one direction of flow;
 - a support base (16) suitable for supporting said food product (11);
 - movement means (17, 18) mechanically connected to said support base (16) so as to cause rotation of said food product (11) in the vicinity of said distribution means and in such a way as to interfere with said flow so as to sprinkle said ingredient in granular form over at least one portion of the surface of said food product (Fig. 1);
- wherein said distribution means (20) comprise at least one rotor (25, or 50), actuated by first motor means (31, or 57) and seated inside a housing (26, or 60) which has at least one supply mouth (Fig. 6, or Fig. 8) for forming said flow of said granular ingredient;
- 2.2 from which the subject-matter of claim 1 differs in that:
- said rotor is provided with a plurality of radial blades;
 and said distribution means *comprise kinematic means and are movable* by said kinematic means so as to assume several supply positions determined by their movement along at least one portion of the side or top surface of said food product.

The subject-matter of claim 1 is therefore new and meets the requirements of Article 33(2) PCT.

- 2.3 The problem to be solved by the present invention may be regarded as improving the distribution of granular product on the surface of a food product.
- 2.4 The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

The provision of a rotor with a plurality of radial blades allows a very smooth flow of granular product to be created, therefore preventing the cake from being damaged by the distribution of the granular product on any of its surfaces (in particular in the case of fragile cakes, such as cakes covered with cream).

In addition, the distribution of the granular product is further improved by the provision of kinematic means to the distribution means (and consequently to said rotor), allowing a control of the direction and distribution of the flow of granular product on the cake (or food product).

There is no disclosure or suggestion of this solution in any of the available documents of the prior art (remark can be made that document D6 shows a rotor with a plurality of radial blades for spreading fertiliser or seeds over agricultural field. However, the skilled person, faced with the above mentioned objective technical problem, would not have been prompted to seek a solution to that problem in such a remote technical field; and anyway would not have arrived at something falling within the terms of the claim, since D6 does not disclose in combination distribution means as defined in this solution).

- 2.5 Hence the subject-matter of claim 1 involves an inventive step and meets the requirements of Article 33(3) PCT.
- 2.6 Claims 2 to 19 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.
3. The machine described in claims 1 to 19 is industrially applicable (Article 33(4) PCT).

**INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY
(SEPARATE SHEET)**

International application No.

PCT/IT2004/000496

Re Item VIII

Certain observations on the international application (Article 6 PCT)

Claim 1 is not clear in that it is written in such a way that the features of the "kinematic means" relative to the distribution means (lines 24 and 25 of claim 1) appear to be only optional. Therefore, it is not clear whether these features do form part of the scope of the claim.

However, since the applicant has amended claim 1 (as originally filed) by adding said terms relative to kinematic means associated with the distribution means, it is assumed that the applicant's intention was that these features form part of the scope of the claim.

Such a claim (i.e. with the features of the kinematic means forming part of the scope of the claim) has therefore been considered in the present international preliminary examination report (see Item V above, italics text in claim 1).

CLAIMS

1. Machine for decorating a food product, in particular a cake (T) having at least one side surface and a top surface, with an ingredient in granular form

- a support structure (2);
 - distribution means (3) mounted on said support structure (2) and able to project said ingredient in granular form (G) in at least one direction of flow;
 - 10 - a support base (4) suitable for supporting said food product (T);
 - movement means (5) mechanically connected to said support base (4) so as to cause rotation of said food product (T) in the vicinity of said distribution means (3) and in such a way as to interfere with said flow so as to sprinkle said ingredient in granular form (G) over at least one portion of the surface of said food product (T);
 - 15 characterized in that said distribution means (3) comprise at least one rotor (31) provided with a plurality of radial blades (37), actuated by first motor means (32) and seated inside a housing (34) which has at least one supply mouth (35) for forming said flow of said granular ingredient (G);
 - 20 and characterized in that said distribution means

(3) can be moved by kinematic means (8) so as to assume several supply positions determined by their movement along at least one portion of the side or top surface of said food product (T).

5 2. Machine according to Claim 1, in which said movement means (5) comprise translation means (6) and rotation means (7), said translation means (6) being able to move said support base 4 between a rest position, for loading and unloading said food product (T), and an 10 operating position in which said food product (T) is made to rotate by said rotation means (7).

15 3. Machine according to Claim 2, in which said food product (T) has at least one side surface and a top surface and in which said distribution means (3) project said flow substantially over said side surface.

20 4. Machine according to Claim 1, in which said movement along at least one portion of the side or top surface of said food product (T) is a translation which is substantially vertical and parallel to the side surface of said food product (T) so as to sprinkle said ingredient in granular form (G) over at least one portion of said side surface.

25 5. Machine according to Claim 1, in which said each radial blade (37) comprises a first portion (38) which extends along the lie of a radial plane parallel to

the axis of rotation and a second portion (39) which is inclined with respect to the first portion with a different inclination and orientation of adjacent blades so as to create a uniform flow along the whole extension 5 of the supply mouth (35).

6. Machine according to any one of the preceding claims, in which said distribution means (3) are able to be moved towards or away from said side surface by means of adjustable positioning means.

10 7. Machine according to Claim 1, in which said kinematic means (8) comprise at least one linear actuator (81) mechanically associated with said distribution means (3) so as to cause movement thereof.

15 8. Machine according to any one of the preceding claims, in which said support base (4) is composed of a plurality of arms (41) each connected at one end to a central transmission shaft (62) which receives its movement from said movement means (5).

20 9. Machine according to any one of the preceding claims, which can be inserted in particular along a line for production of said food product and which comprises transportation means (100) for conveying said food product (T) from an entrance opening to an exit opening, causing said food product (T) to pass in the vicinity of 25 said distribution means (3).

10. Machine according to Claims 2 and 8, in which said support base (4) is able to receive from or transfer to said transportation means (100) said food product (T) when it is in said rest position and in which said support base (4) is raised with respect to said transportation means (100), not interfering therewith when it is in said operating position.

5 11. Machine according to Claim 10, having stopping means situated in the vicinity of said support base (4) so as to allow stoppage and loading of said food product 10 (T) onto said support base (4).

15 12. Machine according to Claim 1 or 3, comprising a screening element (9) for protecting said top surface of said food product (T) from the flow of said ingredient in granular form (G).

13. Machine according to Claim 12, in which said screening element (9) comprises a box-shaped structure (91) provided with an opening (92) for receiving said food product (T) from the side of said top surface.

20 14. Machine according to Claim 12 or 13, comprising adjusting means (93, 94, 95) operating said screening element (9) so as to vary the screened surface area of said food product (T).

15. Machine according to any one of the preceding 25 claims, provided with a system for collecting said

ingredient in granular form (G) which has not adhered to the surface of said food product (T) after being projected by said distribution means (3).

16. Machine according to Claim 15, in which said 5 collecting system consists of at least one extractable drawer situated underneath said support base (4).

17. Machine according to any one of the preceding claims, provided with a system for supplying said 10 ingredient in granular form (G), comprising at least one hopper (50) and at least one conveying channel (51) connected at a first end to said hopper (50) and at its second end to said distribution means (3).

18. Machine according to claim 17, in which said 15 conveying channel (51) conveys said ingredient in granular form (G) to a funnel (52) connected to a supply opening (36) of said rotor (31).

19. Machine according to Claim 17 or 18, in which said conveying channel (51) is a vibrating surface.